

Application Number 10/781,245

Amendment in response to Office Action mailed June 15, 2009

### **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application.

#### **Listing of Claims:**

**Claim 1 (Previously Presented):** An implantable device comprising:

a feedthrough assembly partially disposed within a hermetically sealed housing of the implantable device said feedthrough assembly including:

a sleeve outer portion hermetically bonded to the housing;

a thermal insulator disposed within the sleeve outer portion;

a pin spaced from the housing and at least partially disposed within the thermal insulator, wherein a portion of the pin is configured to be exposed to an external medium; and

a temperature sensor disposed within the pin, wherein a physical parameter of the external medium is sensed through the pin by the sensor and correlates to the temperature of the external medium.

**Claim 2 (Previously Presented):** The device of claim 1, wherein the implantable device is pacemaker, or cardioverter-defibrillator.

**Claim 3 (Original):** The device of claim 1, wherein the implantable device is a lead.

**Claim 4 (Original):** The device of claim 1, wherein the pin includes an hollow interior and the temperature sensor is disposed within the hollow interior.

**Claim 5 (Original):** The device of claim 4, wherein the temperature sensor is in contact with an interior surface of the pin.

**Claim 6 (Original):** The device of claim 4, further comprising a thermal barrier disposed within the hollow interior and isolating the temperature sensor from an interior of the housing.

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Claim 7 (Original): The device of claim 6, wherein the thermal barrier extends beyond the hollow interior of the pin and into the interior of the housing.

Claim 8 (Original): The device of claim 1, further comprising a sleeve inner portion disposed between the pin and the thermal insulator.

Claim 9 (Currently Amended): An implantable device including a feedthrough assembly disposed within a hermetically sealed housing of the implantable device comprising:

means for sensing a physical parameter disposed within a pin; and

means for hermetically sealing the pin to the housing, wherein the pin extends through an opening in the housing such that at least a portion of the pin extends outside of the housing.

Claim 10 (Original): The device of claim 9, wherein means for sensing is a temperature sensor.

Claim 11 (Previously Presented): A feedthrough assembly comprising:

a sleeve positionable within an opening through a housing of an implantable medical device and hermetically sealable to the housing;

an insulator disposed within the sleeve and hermetically sealed thereto;

a pin disposed within and hermetically sealed to the insulator, the pin including a hollow, fluid filled interior, a first membrane configured to be exposed to an external medium, and a second membrane adapted to be coupled with a sensor positionable within the housing, wherein a physical parameter of the second membrane is sensed by the sensor and correlates to a pressure within the external medium.

Claim 12 (Previously Presented): The feedthrough of claim 11, wherein a surface area of the first membrane is smaller than a surface area of the second membrane.

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Claim 13 (New): An implantable device comprising:  
a hermetically sealed housing; and  
a feedthrough assembly disposed in an opening in and hermetically sealed to the housing,  
the feedthrough assembly comprising a sensor assembly arranged in the opening such that at  
least a portion of the sensor assembly extends outside of the housing.

Claim 14 (New): The device of claim 13, wherein the sensor assembly is configured to  
sense one or both of temperature and pressure.

Claim 15 (New): The device of claim 13, wherein the sensor assembly comprises:  
a pin at least partially disposed within the opening in the housing; and  
a temperature sensor disposed within the pin.

Claim 16 (New): The device of claim 13, wherein a portion of the pin within which the  
temperature sensor is disposed extends outside of the housing.

Claim 17 (New): The device of claim 15, wherein the feedthrough assembly further  
comprises:

a sleeve outer portion hermetically bonded to the opening in the housing; and  
a thermal insulator disposed within the sleeve outer portion;  
wherein the pin is at least partially disposed within the thermal insulator.